

# CLIMATE CHANGE SCENARIO TRAINING

## Preparing for an Uncertain Future

### National Park Service Climate Change Response Program

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#### **STATEMENT OF NEED:**

Land managers need skill in understanding and using conceptual as well as quantitative tools when planning for the uncertainty of climate change. Scenario Planning has been identified as a valuable long-range planning tool for uncertain and potentially highly consequential changing conditions but there is little expertise currently available to facilitate or apply this approach within the NPS or the Department of the Interior.

#### **STRATEGY:**

A series of training workshops will be held to educate and train managers, resource specialists, scientists, educators, and planners in the structured Scenario Planning process. By building knowledge of how to apply this tool to various decision environments, the NPS will collaborate with others to increase our capacity for choosing the most appropriate response actions that will be most effective across a range of potential futures or that promote desired outcomes.

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#### **Background:**

Resource management decisions must be based on future expectations. Climate change is generally expected to bring highly consequential and unprecedented changes, but specific future conditions are very difficult to accurately predict. Scenario planning offers a tool for developing a structured, science-based decision-making framework in the face of an uncertain future. Climate change scenario planning involves exploring qualitative as well as quantitative models in order to envision future outcomes under a variety of different decisions, policies, or societal pathways.

Scenario planning has been explored within the National Park Service as a long-range planning tool for incorporating climate change into a range of park management processes and documents, including General Management Plans and Resource Stewardship Strategies. Major benefits of this approach are:

- identification of key uncertainties
- incorporation of alternative perspectives into conservation planning
- improved capacity for adaptive management to promote resource sustainability

Since 2007, the National Park Service has held three workshops exploring five different case studies. Efforts engage a range of federal, academic, and private partners to explore approaches that are tailored to management relevant questions regarding the future of natural and cultural resources. A formal interview process has been established to survey previous participants in order to learn and build from these efforts as we initiate the next series of workshops designed to train NPS staff and partners in the scenario planning process.

#### **Training Approach:**

From October 2010 to February 2011, the Climate Change Response Program is taking the next step in building capacity for using Scenario Planning by partnering with the Global Business Network to host three training workshops. The workshops will give NPS and other agency staff and partners an overall understanding of the Scenario Planning process as it applies to protected area management and climate change adaptation. Course participants will:

- Gain an overall understanding of the Scenario Planning process as it is applied to protected area management and climate change,
- Walk through the scenario building process for two landscape-scale case studies per workshop,
- Develop climate drivers, uncertainties and impacts utilizing bioregional peer-reviewed information available from the NPS Climate Change Response Program,
- Create scenarios and narratives for the future using the framework and process learned in the course, and
- Begin a dialogue about how this process can inform future planning at the park level for better management decision making.

## **Workshops:**

### **Great Lakes and Atlantic Coast Workshop**

Duluth, MN, October 5 - 7, 2010

Thirty workshop participants will apply the Scenario Planning framework to two case studies in the Great Lakes and Atlantic Coast bio-regions. Participants will use major climate drivers, such as warming temperatures, changing precipitation patterns, and sea level rise to identify highly consequential and uncertain impacts like altered vegetation patterns, increased temperature and salinity in wetland, coastal, and shoreline environments to create narratives that can guide management options under several possible futures.

### **Urban Landscapes & Eastern Forests Workshop**

Washington, D.C., December 7 – 9, 2010

A workshop utilizing case studies in Urban Landscapes and Eastern Forests bio-regions will host thirty participants in Washington, D.C. to examine climate drivers, uncertainties, and impacts on these landscapes with a special emphasis on how climate change will impact cultural and historic resources and landscapes in an urban setting.

### **Western Mountains, Pacific Islands, and Arid Lands Workshop**

Denver, CO, February 8 – 10, 2011

Forty-five workshop participants will consider climate change across three diverse case studies. Participants will explore drivers such as reduced snowpack and changing precipitation and streamflow patterns to envision the uncertainty and significance of impacts to western mountains, arid lands and Pacific island systems. Special emphasis will be placed on the integration of cultural and natural resource issues and their joint protection.

**Partner:** Global Business Network, <http://www.gbn.com>

## **More Information:**

Visit <http://www.nps.gov/climatechange/adaptationplanning.cfm> for additional materials on the NPS approach to climate change scenario planning.

DOI Employees: To register for a course, visit DOI Learn and search for 'Scenario Planning Training Workshops.' Please register at least 2 months prior to each class. There is no tuition for this course; travel cost is paid by participant.

For information on these courses, contact:

October workshop: [Shelly\\_Clubb@nps.gov](mailto:Shelly_Clubb@nps.gov)

December workshop: [Melanie\\_Wood@nps.gov](mailto:Melanie_Wood@nps.gov)

February workshop: [Patrick\\_Malone@nps.gov](mailto:Patrick_Malone@nps.gov)